

WHAT IS CLAIMED:

- Sub 1A* 1 A process for providing a concentrate of vegetable protein comprising:
- a) applying a pressure of from about 400 to 800 pounds per square inch (psi) to an initial solution/dispersion of vegetable protein and associated vegetable solids;
 - b) providing or adding CO₂ at the elevated pressure to form carbonic acid (H₂CO₃) in the solution/dispersion;
 - c) heating the solution/dispersion, resulting in an increase in pressure;
 - d) adding additional CO₂ to the solution dispersion to reduce the pH of the solution/dispersion;
 - e) holding the pressurized and heated solution/dispersion;
 - f) depressurizing the solution/dispersion; and
 - g) removing solid precipitate which has a higher concentration of protein than the initial solution/dispersion.

b 1B 2. The process of claim 1 wherein said initial solution dispersion comprises a solution or dispersion of soy solids.

b 1C 3. The process of claim 2 wherein said soy solids comprise a material selected from the group consisting of meal, flour and flake.

b 1C 4. The process of claim 1 wherein said vegetable protein and associated vegetable solids is neutralized before step a).

b 1C 5. The process of claim 4 wherein the concentration of protein in the solid precipitate of step g) has a protein concentration of at least 90% by total weight of solids.

6. The process of claim 2 wherein the concentration of protein in the solid precipitate of step g) has a protein concentration of at least 90% by total weight of solids.

~~7. The process of claim 3 wherein the concentration of protein in the solid precipitate of step g) has a protein concentration of at least 90% by total weight of solids.~~

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8. The process of claim ~~4~~ wherein the protein is soy protein and the concentration of soy protein in the solid precipitate of step g) has a protein concentration of at least 90% by total weight of solids.

~~b4~~ 9. The process of claim 2 wherein the pH in step d) is reduced to between 4.2 and 4.8.

~~(10. The process of claim 7 wherein the pH in step d) is reduced to between 4.2 and 4.8.~~

~~b5~~ 11. The process of claim 2 wherein holding time in step e) is for between 10 and 60 minutes.

12. The process of claim 11 wherein the holding time is at a temperature between 30 and 75 degrees Centigrade and a pressure between 400 and 1200 psi.

~~13. The process of claim 2 wherein the pH in step d) is reduced to between 4.2 and 5.0.~~

~~14. The process of claim ~~7~~ wherein the pH in step d) is reduced to between 4.2 and 5.0.~~

*a1 a2 B2
B3*

*add
C16*